PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION *US/09/885,189*

OIPE

#5

DATE: 05/02/2002
TIME: 15:07:48

INPUT SET: S36845.raw

> **This Raw Listing contains the General
> Information Section and up to the first 5 pages.**

```
 1                              SEQUENCE LISTING
 2
 3   (1)      General Information:
 4            (i) APPLICANT: Chris SOMERVILLE
 5                           Pierre BROUN
 6                           Frank VAN DE LOO
 7
 8            (ii) TITLE OF INVENTION: Production of Hydroxylated Fatty Acids in
 9                                     Genetically Modified Plants
10
11            (iii) NUMBER OF SEQUENCES:    15
12
13            (iv) CORRESPONDENCE ADDRESS:
14                    (A) ADDRESSEE:          PILLSBURY MADISON & SUTRO, LLP
15                    (B) STREET:             1100 NEW YORK AVENUE, N.W.
16                    (C) CITY:               WASHINGTON
17                    (D) STATE:              D.C.
18                    (E) COUNTRY:            USA
19                    (F) ZIP:                20005-3918
20
21            (v) COMPUTER READABLE FORM:
22                    (A) MEDIUM TYPE:        Diskette, 3.50 inch
23                    (B) COMPUTER:           IBM PC compatible
24                    (C) OPERATING SYSTEM:   MS-DOS/PC-DOS
25                    (D) SOFTWARE:           Word Perfect 5.1
26
27            (vi) CURRENT APPLICATION DATA:
28                    (A) APPLICATION NUMBER: 09/885,189
29                    (B) FILING DATE: 21-June-2001
30                    (C) CLASSIFICATION:
31
32            (vii) PRIOR APPLICATION DATA:
33                    (A) APPLICATION NUMBER:   US/08/597,313D
34                    (B) FILING DATE:          February 6, 1996
35
36     (vii) PRIOR APPLICATION DATA:
37                    (A) APPLICATION NUMBER:   08/530,862
38                    (B) FILING DATE:          September 20, 1995
39
40            (vii) PRIOR APPLICATION DATA:
41                    (A) APPLICATION NUMBER:   08/320,982
42                    (B) FILING DATE:          October 11, 1994
43
44            (vii) PRIOR APPLICATION DATA:
45                    (A) APPLICATION NUMBER:   08/314,596
46                    (B) FILING DATE:          September 26, 1994
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47
48
49      (2) INFORMATION FOR SEQ ID NO:1:
50
51          (i) SEQUENCE CHARACTERISTICS:
52              (A) LENGTH:                  543  nucleotides
53              (B) TYPE:                    nucleotide
54              (C) STRANDEDNESS:            single
55              (D) TOPOLOGY:                linear
56
57          (xi) SEQUENCE DESCRIPTION:  SEQ ID NO:1:
58
59  TATTGGCACC GGCGGCACCA TTCCAACAAT GGATCCCTAG AAAAAGATGA AGTCTTTGTC        60
60
61  CCACCTAAGA AAGCTGCAGT CANATGGTAT GTCAAATACC TCAACAACCC TCTTGGACGC       120
62
63  ATTCTGGTGT TAACAGTTCA GTTTATCCTC GGGTGGCCTT TGTATCTAGC CTTTAATGTA       180
64
65  TCAGGTAGAC CTTATGATGG TTTCGCTTCA CATTTCTTCC CTCATGCACC TATCTTTAAG       240
66
67  GACCGTGAAC GTCTCCAGAT ATACATCTCA GATGCTGGTA TTCTAGCTGT CTGTTATGGT       300
68
69  CTTTACCGTT ACGCTGCTTC ACAAGGATTG ACTGCTATGA TCTGCGTCTA CGGAGTACCG       360
70
71  CTTTTGATAG TGAACTTTTT CCTTGTCTTG GTCACTTTCT TGCAGCACAC TCATCCTTCA       420
72
73  TTACCTCACT ATGATTCAAC CGAGTGGGAA TGGATTAGAG GAGCTTTGGT TACGGTAGAC       480
74
75  AGAGACTATG GAATCTTGAA CAAGGTGTTT CACAACATAA CAGACACCCA CGTAGCACAC       540
76
77  CAC                                                                     543
78
79      (2) INFORMATION FOR SEQ ID NO:2:
80
81          (i) SEQUENCE CHARACTERISTICS:
82              (A) LENGTH:                  544  nucleotides
83              (B) TYPE:                    nucleotide
84              (C) STRANDEDNESS:            single
85              (D) TOPOLOGY:         .      linear
86          (xi) SEQUENCE DESCRIPTION:  SEQ ID NO:2:
87
88  TATAGGCACC GGAGGCACCA TTCCAACACA GGATCCCTCG AAAGAGATGA AGTATTTGTC        60
89
90  CCAAAGCAGA AATCCGCAAT CAAGTGGTAC GGCGAATACC TCAACAACCC TCCTGGTCGC       120
91
92  ATCATGATGT TAACTGTCCA GTTCGTCCTC GGATGGCCCT TGTACTTAGC CTTCAACGTT       180
93
94  TCTGGCAGAC CCTACAATGG TTTCGCTTCC CATTTCTTCC CCAATGCTCC TATCTACAAC       240
95
96  GACCGTGAAC GCCTCCAGAT TTACATCTCT GATGCTGGTA TTCTAGCCGT CTGTTATGGT       300
97
98  CTTTACCGTT ACGCTGTTGC ACAAGGACTA GCCTCAATGA TCTGTCTAAA CGGAGTTCCG       360
99
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INPUT SET: S36845.raw

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100    CTTCTGATAG TTAACTTTTT CCTCGTCTTG ATCACTTACT TACAACACAC TCACCCTGCG      420
101
102    TTGCCTCACT ATGATTCATC AGAGTGGGAT TGGCTTAGAG GAGCTTTAGC TACTGTAGAC      480
103
104    AGAGACTATG GAATCTTGAA CAAGGTGTTC CATAACATCA CAGACACCCA CGTCGCACAC      540
105
106    CACT                                                                   544
107
108        (2) INFORMATION FOR SEQ ID NO:3:
109
110            (i) SEQUENCE CHARACTERISTICS:
111                (A) LENGTH:                    1855   nucleotides
112                (B) TYPE:                      nucleotide
113                (C) STRANDEDNESS:              single
114                (D) TOPOLOGY:                  linear
115
116            (xi) SEQUENCE DESCRIPTION:   SEQ ID NO:3:
117
118    ATGAAGCTTT ATAAGAAGTT AGTTTTCTCT GGTGACAGAG AAATTNTGTC AATTGGTAGT       60
119
120    GACAGTTGAA GCAACAGGAA CAACAAGGAT GGTTGGTGNT GATGCTGATG TGGTGATGTG      120
121
122    TTATTCATCA AATACTAAAT ACTACATTAC TTGTTGCTGC CTACTTCTCC TATTTCCTCC      180
123
124    GCCACCCATT TTGGACCCAC GANCCTTCCA TTTAAACCCT CTCTCGTGCT ATTCACCAGA      240
125
126    AGAGAAGCCA AGAGAGAGAG AGAGAGAATG TTCTGAGGAT CATTGTCTTC TTCATCGTTA      300
127
128    TTAACGTAAG TTTTTTTTGA CCACTCATAT CTAAAATCTA GTACATGCAA TAGATTAATG      360
129
130    ACTGTTCCTT CTTTTGATAT TTTCAGCTTC TTGAATTCAA GATGGGTGCT GGTGGAAGAA      420
131
132    TAATGGTTAC CCCCTCTTCC AAGAAATCAG AAACTGAAGC CCTAAAACGT GGACCATGTG      480
133
134    AGAAACCACC ATTCACTGTT AAAGATCTGA AGAAAGCAAT CCCACAGCAT TGTTTCAAGC      540
135
136    GCTCTATCCC TCGTTCTTTC TCCTACCTTC TCACAGATAT CACTTTAGTT TCTTGCTTCT      600
137
138    ACTACGTTGC CACAAATTAC TTCTCTCTTC TTCCTCAGCC TCTCTCTACT TACCTAGCTT      660
139
140    GGCCTCTCTA TTGGGTATGT CAAGGCTGTG TCTTAACCGG TATCTGGGTC ATTGGCCATG      720
141
142    AATGTGGTCA CCATGCATTC AGTGACTATC AATGGGTAGA TGACACTGTT GGTTTTATCT      780
143
144    TCCATTCCTT CCTTCTCGTC CCTTACTTCT CCTGGAAATA CAGTCATCGT CGTCACCATT      840
145
146    CCAACAATGG ATCTCTCGAG AAAGATGAAG TCTTTGTCCC ACCGAAGAAA GCTGCAGTCA      900
147
148    AATGGTATGT TAAATACCTC AACAACCCTC TTGGACGCAT TCTGGTGTTA ACAGTTCAGT      960
149
150    TTATCCTCGG GTGGCCTTTG TATCTAGCCT TTAATGTATC AGGTAGACCT TATGATGGTT     1020
151
152    TCGCTTCACA TTTCTTCCCT CATGCACCTA TCTTTAAAGA CCGAGAACGC CTCCAGATAT     1080
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RAW SEQUENCE LISTING
PATENT APPLICATION   *US/09/885,189*

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153
154    ACATCTCAGA TGCTGGTATT CTAGCTGTCT GTTATGGTCT TTACCGTTAC GCTGCTTCAC    1140
155
156    AAGGATTGAC TGCTATGATC TGCGTCTATG GAGTACCGCT TTTGATAGTG AACTTTTTCC    1200
157
158    TTGTCTTGGT AACTTTCTTG CAGCACACTC ATCCTTCGTT ACCTCATTAT GATTCAACCG    1260
159
160    AGTGGGAATG GATTAGAGGA GCTTTGGTTA CGGTAGACAG AGACTATGGA ATATTGAACA    1320
161
162    AGGTGTTCCA TAACATAACA GACACACATG TGGCTCATCA TCTCTTTGCA ACTATACCGC    1380
163
164    ATTATAACGC AATGGAAGCT ACAGAGGCGA TAAAGCCAAT ACTTGGTGAT TACTACCACT    1440
165
166    TCGATGGAAC ACCGTGGTAT GTGGCCATGT ATAGGGAAGC AAAGGAGTGT CTCTATGTAG    1500
167
168    AACCGGATAC GGAACGTGGG AAGAAAGGTG TCTACTATTA CAACAATAAG TTATGAGGCT    1560
169
170    GATAGGGCGA GAGAAGTGCA ATTATCAATC TTCATTTCCA TGTTTTAGGT GTCTTGTTTA    1620
171
172    AGAAGCTATG CTTTGTTTCA ATAATCTCAG AGTCCATNTA GTTGTGTTCT GGTGCATTTT    1680
173
174    GCCTAGTTAT GTGGTGTCGG AAGTTAGTGT TCAAACTGCT TCCTGCTGTG CTGCCCAGTG    1740
175
176    AAGAACAAGT TTACGTGTTT AAAATACTCG GAACGAATTG ACCACAANAT ATCCAAAACC    1800
177
178    GGCTATCCGA ATTCCATATC CGAAAACCGG ATATCCAAAT TTCCAGAGTA CTTAG        1855
179
180        (2) INFORMATION FOR SEQ ID NO:4:
181
182            (i) SEQUENCE CHARACTERISTICS:
183                 (A)  LENGTH:                    384 amino acids
184                 (B)  TYPE:                      amino acid
185                 (C)  STRANDEDNESS:
186                 (D)  TOPOLOGY:                  linear
187
188           (xi) SEQUENCE DESCRIPTION:   SEQ ID NO:4:
189
190
191        Met Gly Ala Gly Gly Arg Ile Met Val Thr Pro Ser Ser Lys Lys Ser
192         1               5                  10                  15
193
194        Glu Thr Glu Ala Leu Lys Arg Gly Pro Cys Glu Lys Pro Pro Phe Thr
195                     20                  25                  30
196
197        Val Lys Asp Leu Lys Lys Ala Ile Pro Gln His Cys Phe Lys Arg Ser
198                 35                  40                  45
199
200        Ile Pro Arg Ser Phe Ser Tyr Leu Leu Thr Asp Ile Thr Leu Val Ser
201              50                  55                  60
202
203        Cys Phe Tyr Tyr Val Ala Thr Asn Tyr Phe Ser Leu Leu Pro Gln Pro
204         65                  70                  75                  80
205
```

```
206     Leu Ser Thr Tyr Leu Ala Trp Pro Leu Tyr Trp Val Cys Gln Gly Cys
207                     85              90                      95
208
209     Val Leu Thr Gly Ile Trp Val Ile Gly His Glu Cys Gly His His Ala
210                     100             105             110
211
212     Phe Ser Asp Tyr Gln Trp Val Asp Asp Thr Val Gly Phe Ile Phe His
213             115             120             125
214
215     Ser Phe Leu Leu Val Pro Tyr Phe Ser Trp Lys Tyr Ser His Arg Arg
216         130             135             140
217
218     His His Ser Asn Asn Gly Ser Leu Glu Lys Asp Glu Val Phe Val Pro
219     145             150             155             160
220
221     Pro Lys Lys Ala Ala Val Lys Trp Tyr Val Lys Tyr Leu Asn Asn Pro
222             165             170             175
223
224     Leu Gly Arg Ile Leu Val Leu Thr Val Gln Phe Ile Leu Gly Trp Pro
225             180             185             190
226
227     Leu Tyr Leu Ala Phe Asn Val Ser Gly Arg Pro Tyr Asp Gly Phe Ala
228             195             200             205
229
230     Ser His Phe Phe Pro His Ala Pro Ile Phe Lys Asp Arg Glu Arg Leu
231         210             215             220
232
233     Gln Ile Tyr Ile Ser Asp Ala Gly Ile Leu Ala Val Cys Tyr Gly Leu
234     225             230             235             240
235
236     Tyr Arg Tyr Ala Ala Ser Gln Gly Leu Thr Ala Met Ile Cys Val Tyr
237             245             250             255
238
239     Gly Val Pro Leu Leu Ile Val Asn Phe Phe Leu Val Leu Val Thr Phe
240             260             265             270
241
242     Leu Gln His Thr His Pro Ser Leu Pro His Tyr Asp Ser Thr Glu Trp
243         275             280             285
244
245     Glu Trp Ile Arg Gly Ala Leu Val Thr Val Asp Arg Asp Tyr Gly Ile
246         290             295             300
247
248     Leu Asn Lys Val Phe His Asn Ile Thr Asp Thr His Val Ala His His
249     305             310             315             320
250
251     Leu Phe Ala Thr Ile Pro His Tyr Asn Ala Met Glu Ala Thr Glu Ala
252             325             330             335
253
254     Ile Lys Pro Ile Leu Gly Asp Tyr Tyr His Phe Asp Gly Thr Pro Trp
255             340             345             350
256
257     Tyr Val Ala Met Tyr Arg Glu Ala Lys Glu Cys Leu Tyr Val Glu Pro
258             355             360             365
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SEQUENCE VERIFICATION REPORT
PATENT APPLICATION *US/09/885,189*

INPUT SET: S36845.raw

Line   Error   Original Text

SEQUENCE MISSING ITEM REPORT
PATENT APPLICATION   *US/09/885,189*

INPUT SET: S36845.raw

< < THERE ARE NO ITEMS MISSING > >

SEQUENCE CORRECTION REPORT
PATENT APPLICATION   *US/09/885,189*

DATE: 05/02/2002
TIME: 15:07:50

INPUT SET: S36845.raw

Line	Original Text	Corrected Text